

DUBAI FALCON HOSPITAL: THE FIRST SPECIALIST HOSPITAL FOR RAPTORS IN THE MIDDLE EAST

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Introduction

The Dubai Falcon Hospital was established by His Highness Sheikh Hamdan bin Rashid al Maktoum, Deputy Ruler of Dubai, in 1983. The facility was the first specialist hospital for falcons in the Middle East and between 1983 to 2001 under the direction of the first Hospital Director Dr David Remple, an international reputation for excellence in the field of falcon medicine was established. The Hospital has been at the forefront of developing the discipline of raptor medicine and has pioneered important research into the diagnosis (Lumeij and Remple, 1991, 1992; Lumeij *et al.*, 1993, 1997, 1998), epidemiology (Verwoerd *et al.*, 2000), pathology (Wernery *et al.*, 1992; Oaks, 1993; Di Somma *et al.*, 2003a, 2003b), therapy (Lierz and Remple, 1997; Molnar and Ptacek, 2001; Di Somma and Garlinzoni, 2002; Bailey *et al.*, 2003a), prevention (Remple, 1995, 2000, Bailey *et al.*, 2000) and surgical correction (Remple and Remple, 1987; Remple, 1993; Remple and Al-Ashbal, 1993; Remple and Forbes, 2000; Remple, 2001; Redig and Remple, 2001) of diseases of raptors. Additionally, important contributions have been made to the understanding of Arabic falconry (Remple, 1993; Remple and Gross, 1993; Remple, 1988; Remple and Riddle, 1994), wildlife diseases (Molnar *et al.*, 2001; Wernery *et al.*, 2001) and to the management and conservation of captive and wild populations of raptors (Barton, 1999, 2000; Bailey *et al.*, 2003b).

The Hospital

The main focus of the Dubai Falcon Hospital is to provide a clinical service to the hunting falcons and the wildlife collection of HH Sheikh Hamdan bin Rashid al Maktoum. The hospital is an integrated facility where trained falconry birds receive modern medical treatment and falconers are informed of the latest advances in the understanding of avian healthcare. The hospital is a state-of-the-art veterinary center with facilities for surgical investigations, endoscopic examination and diagnostic imaging, including both conventional radiography, and fluoroscopy, diagnostic laboratories, medical history recording and a feather repairing laboratory. Along with a quarantine unit the hospital has over 30 fully equipped hospitalisation wards where sick birds can be isolated and individually treated. Falcons visiting the DFH receive a high standard of health care from a specialist team of international veterinarians and technicians.

Preventive Medicine

About 1,700 falcons are seen at the DFH each year. Since the hospital was opened in 1983, over 20,000 different falcons have received treatment. Dubai Falcon Hospital initiated the first falcon micro-chipping programme in the Middle East in 1987 and since this time over 17,000 birds have been implanted using the AVID microchip system (AVID, Norco, California, USA). Microchipping falcons is now part of standard operating procedures in the large falcon hospitals in the region and is widely used by raptor biologists studying the population dynamics of free-living falcon populations (Barton, 2000). Through the delivery of veterinary care in combination with raising the awareness of disease issues amongst the falconers the hospital has contributed to the improved health and longevity of captive falcons in the region.

The philosophy underlying the hospital is the accepted medical principle, that *it is far easier to prevent diseases than to cure them*. The DFH promotes a comprehensive preventive medicine programme. Falconers are encouraged to bring their birds to the hospital so that health checks, anti-parasitic medication and vaccinations against the most common infectious diseases in the Middle East can be regularly given. Close collaboration between the DFH and the Central Veterinary Research Laboratory in Dubai has contributed to the development of vaccines specifically for falcons (Wernery, 2000).

The DFH is fully equipped with the latest anaesthesia, endoscopy, radiography and surgical equipment to ensure that diseases are promptly diagnosed and that sick birds receive immediate medical treatment. An in-house laboratory has recently been developed and DFH staff are able to conduct parasitology, haematology, blood chemistry, microbiology and immunology investigations on medical samples collected from sick falcons. The ability to rapidly diagnose diseases on-site ensure that sick birds are quickly given the most effective treatment.

Improving Falcon Healthcare Through Practical Research

The DFH has been at the forefront of many of the advances in falcon medicine since its inception in 1983 and this work continues. The staff working at the DFH liaise with specialists working at other regional and international laboratories and falcon hospitals to further scientific understanding of the important diseases of raptors. Special projects aimed at improving falcon health and welfare are being undertaken on the following topics;

- The swifter diagnosis of infectious diseases such as aspergillosis.
- The determination of more effective treatment regimens for important therapeutic agents in falcons, such as antifungal agents.
- The improvement of current treatment methods for surgical conditions such as bumblefoot.

Co-ordination of the Middle East Falcon Research Group

Hospital staff co-ordinate the production of *Falco*, the newsletter of The Middle East Falcon Research Group (MEFRG) with colleagues in the UK and UAE. The MEFRG was established in 1993 and intends to bring together experts in falcons and falconry, veterinary surgeons, falcon biologists and conservationists working in the Middle East. The main objectives of the MEFRG are presented in Table 1. Further information and back issues of *Falco* are on the internet at www.falcons.co.uk/MEFRG/. While *Falco* concentrates on publicising falcon-related topics, it also promotes important issues related to non-falconry raptors and the quarry species, such as houbara bustards (*Chlamydotis undulata maqueenii*), in the region.

Wadi Al Safa Wildlife Centre

A more recent initiative of HH. Sheikh Hamdan Bin Rashid is the Wadi Al Safa Wildlife Centre, which has strong veterinary links with Dubai Falcon Hospital. Situated at three different sites outside of Dubai, the Wildlife Centre has been responsible for the breeding and rehabilitation of many local and endangered species. Since its inception six years ago, species such as buff-crested bustard (*Eupodotis gindiana*), white-bellied bustard (*Eupodotis senegalensis*), crowned crane (*Balearica regulorum*), desert eagle owl (*Bubo ascalaphus*), Arabian oryx (*Oryx leucoryx*), rheem gazelle (*Gazella subgutturosa marica*), plus many other less critical species have all been bred.

With a total area of more than 1,000 hectares, Wadi Al Safa Wildlife Centre is firmly committed to the conservation and breeding of those species in its care. Wherever possible natural vegetation and ground cover is used for shade and hides for those species which can adapt to the ambient environmental conditions, thus avoiding the need for elaborate housing. Separate specialised housing is available for hospital quarters, animal maintenance rooms, breeding/rearing rooms, quarantine facilities and for the production of prey and food species.

Currently, the Wadi Al Safa Wildlife Centre is participating with other facilities in many local, regional and international breeding and exchange programmes. Through the European Endangered Species programme (EEP) a number of cheetah (*Acinonyx jubatus*) have recently been acquired to help augment the regional cheetah programme. These animals now form an important part of the EEP plan for this species. Arabian oryx have been exchanged with EEP participants allowing the acquisition of new breeding stock from Europe as well as Jordan. This has allowed the Wildlife Centre to build up a total herd of almost 100 animals. Recently a group of three desert eagle owls have been donated to the World Owl Trust in the UK to help restart their breeding programme for this species.

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Table 1. Objectives of the Middle East Falcon Research Group.

1.- To provide	A central body for the co-ordination of research activities related to falcons and falconry.
2.- To promote	A forum to exchange information and promote collaborative research programmes. Research on health and diseases in falcons in the Middle East and falcon nutrition. Field studies on falcon migration, taxonomy, reproductive biology, nutritional ecology and behaviour. Improved management conditions of captive falcons through educational awareness programmes. A better understanding of falconry as part of the Arab cultural heritage.
3.- To hold	Regional workshops on medical, ecological, falconry and conservation issues.
4.- To publish	A twice yearly newsletter, <i>Falco</i> , containing contributions on medical, biological and conservation topics of common interest, new developments and recent medical advances.